

REMARKS

This application has been reviewed in light of the Office Action dated October 6, 2006. Claims 1-18 are presented for examination. Claims 1 and 15-17, the independent claims, have been amended to define still more clearly what Applicant regards as the invention. Favorable reconsideration is respectfully requested.

Initially, Applicant again respectfully requests to schedule a telephone interview with the Examiner, prior to issuance of the Examiner's next Action.

In the outstanding Office Action, Claims 1, 2, 5-13 and 15-18 were rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent 6,108,441 (Hiratsuka et al.). In addition, Claim 3 was rejected under 35 U.S.C. § 103(a) as being obvious from *Hiratsuka* in view of U.S. Patent 5,231,504 (Magee), Claim 4, as being obvious from *Hiratsuka* in view of U.S. Patent 5,937,089 (Kobayashi), and Claim 14, as being obvious from *Hiratsuka* in view of U.S. Patent 6,172,681 (Ueda).

It is believed that what is claimed in the independent claims, and the prior art, have been adequately discussed in previous papers, and it is not believed to be necessary to repeat that discussion in full.

The aspect of the invention set out in independent Claim 1 is an image processing apparatus for performing color adjustment for image data, and comprises designating means for designating a reference color, an adjusted color of the reference color, and an adjustment region in a color space. According to Claim 1, the adjustment region (i) has an interior portion and a boundary, (ii) is contained within the color space such that the adjustment region is only a part of the color space, and (iii) includes the reference color and the adjusted color. The apparatus also has region determining means

for determining whether a pixel value of input image data is in the adjustment region, and adjusted value calculating means for calculating an adjusted pixel value of the image data on the basis of a function of the reference color, the adjusted color and a boundary of the adjustment region, if the region determining means determines that the pixel value of the image data is in the adjustment region.

The changes made to the language of Claim 1 are presented in an effort to make even clearer that the adjustment region is in, and is only a part of, the color space, and such that the color space includes points that are neither in the designated adjustment region nor on the boundary thereof.

Thus, in an apparatus according to Claim 1, color adjustment is performed at a point *only if* the pixel value of the point falls within the specified (designated) region of the color space. Because this region is not the entire color space, it will be appreciated that the changes made do not affect the entire color space, and do not require such heavy commitments of processing time as in the prior art. At the same time, the problems encountered conventionally with discontinuities are avoided, as well.

As Applicant understands the Examiner's rejection, that rejection appears to be based on the view that the claim language was previously capable of being read on an adjustment region that was identical to the color space, although it has been Applicant's intent to exclude such an arrangement from the claim scope.

First, the Examiner's comments, at pages 2 and 3, as to why he did not accept the arguments presented in the last Amendment, appear to be based on the belief that the claims do not recite a limited region in which the color adjustment is performed. As stated above, it is Applicant's intention to claim that the adjustment region is only a

limited portion of the color space, and cannot be the whole color space. Moreover, in applying the prior art to the claim language, the Examiner states that he considers col. 8, lines 17-25, of *Hiratsuka* to meet the recitation of a color adjustment region, and of the process of determining whether a given pixel is within such region.

In the *Hiratsuka* system, an operator designates one or more colors that are to be adjusted, and designates respective colors to which those colors are to be changed. This process of color adjustment can be performed in a number of different color spaces, although the *Hiratsuka* specification uses an LCH as an example.

In processing the data of the image, the *Hiratsuka* system processes each pixel as follows. The distance  $d_i$  (in the color space) of the pixel's color from each of the designated colors is calculated (that is,  $d_1$  is the distance from the first designated color, etc.), and the color of the pixel is adjusted in a way that is based on the colors to which those designated colors are respectively corrected. The adjustment made to the color of an arbitrary pixel is based on a combination of the parameters of the adjustments of the respective designated colors, weighted by an amount that is a function of the pixel's distances to the various designated colors. In the example given in col. 8, the mentioned function of the distance is  $f(x) = x^2$ . Thus, the farther a given pixel is from the designated colors, the smaller will be the amount of adjustment, while if it is very close to one of the designated colors, it will be adjusted very similarly to that designated color.

According to the *Hiratsuka* description, there is some adjustment of the color of *every* pixel in the LCH color space, regardless of the location of that pixel's color in the color space. Applicant strongly believes that this is inconsistent with the language of

the independent claims, as *Hiratsuka* has no color adjustment region contained within, but forming only a part of, the color space.

Moreover, even if it were correct to view the entire color space as such a color adjustment region such as is recited in Claim 1, Applicant believes that that claim would still be allowable. In col. 8, lines 17-25, for example, particularly cited by the Examiner as teaching such region, and the recited determination as to whether a given pixel is within the region, it appears to Applicant that *every* pixel of data is subjected to the *same* processing. No actual determination is made as to whether the pixel is within the adjustment region, and much less does the processing that is given to a pixel depend on the outcome of such a determination.

Again, despite the statements in the Office Action, it is not seen where the Office has explained how the Examiner believes that the adjustment of the color of a pixel within the color space (again assuming, for argument's sake, that the entire color space could be taken as the recited color adjustment region), is based in any way on the boundary of the region, as is recited in the claims. On the contrary, it appears to Applicant that the processing of a given pixel is not in any way determined by the boundaries of the color space.

For all these reasons, Applicant submits that Claim 1 is allowable over *Hiratsuka*.

Independent Claims 15-17 are method, system and program claims, respectively, corresponding to apparatus Claim 1, and are believed to be patentable for at least the same reasons as discussed above in connection with Claim 1.

A review of the other art of record has failed to reveal anything which, in Applicant's opinion, would remedy the deficiencies of the art discussed above, as a reference against the independent claims herein. Those claims are therefore believed patentable over the art of record.

The other claims in this application are each dependent from one or another of the independent claims discussed above and are therefore believed patentable for the same reasons. Since each dependent claim is also deemed to define an additional aspect of the invention, however, the individual reconsideration of the patentability of each on its own merits is respectfully requested.

In view of the foregoing amendments and remarks, Applicant respectfully requests favorable reconsideration and allowance of the present application.

Applicant's undersigned attorney may be reached in our New York Office by telephone at (212) 218-2100. All correspondence should continue to be directed to our address listed below.

Respectfully submitted,

/Leonard P Diana/  
Leonard P. Diana  
Attorney for Applicant  
Registration No. 29,296

FITZPATRICK, CELLA, HARPER & SCINTO  
30 Rockefeller Plaza  
New York, New York 10112-3801  
Facsimile: (212) 218-2200